

In the Claims:

Please amend the claims to read as follows:

1. (previously presented) A method of forming a cover on a golf ball product comprising:

positioning a spherical uncovered golf ball product in the center of a mold, the mold having a spherical mold surface,

closing the mold around the golf ball product,

mixing a polyurethane prepolymer and a curing agent to form a thermoset reaction mixture,

injecting the reaction mixture into the mold to form a golf ball cover_layer over the golf ball product therein,

allowing the reaction mixture to gel and form a golf ball,

and

opening the mold and removing the golf ball within about 10 to 60 seconds after the injecting step.

2. (previously presented) The method of claim 1 in which the spherical mold surface includes projections for forming dimples in the golf ball cover layer.

3. (original) The method of claim 1 in which said step of injecting the reaction mixture into the closed mold is performed within 0.5 to 10 seconds.

4. (previously presented) The method of claim 1 in which the polyurethane prepolymer has a viscosity of less than 1000 cps at 25° C.

5. (original) The method of claim 4 in which the curing agent has a viscosity of less than 2000 cps at 25° C.

6. (original) The method of claim 1 in which the curing agent has a viscosity of less than 2000 cps at 25° C.

7. (original) The method of claim 1 in which the uncovered golf ball product is a wound golf ball core.

8. (original) The method of claim 1 in which the uncovered golf ball product is a solid core.

9. (original) The method of claim 1 in which the uncovered golf ball product comprises a solid core and a mantle layer surrounding the core.

10. (original) The method of clam 1 in which the uncovered golf ball product comprises a solid core and a lattice structure over the core.

11. (original) The method of claim 1 in which the polyurethane prepolymer is selected from the class consisting of meta-toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, pmdi, 3,3'-dimethyl-4,4-biphenyl diisocyanate, naphthalene diisocyanate, and para-phenylene diisocyanate.

12. (original) The method of claim 1 in which the mold is opened and the golf ball is removed about 45 seconds after the injecting step.

13. (withdrawn) A method of forming a golf ball product comprising the steps of:

mixing a polyurethane prepolymer and a curing agent to form a thermoset reaction mixture,

injecting the reaction mixture into an empty mold having a cavity,

allowing the reaction mixture to gel and form a molded product, and

opening the mold and removing the molded product within about 10 to 60 seconds after the injecting step.

14. (withdrawn) The method of claim 13 in which said step of injecting the reaction mixture into the closed mold is performed within 0.5 to 10 seconds.

15. (withdrawn) The method of claim 13 in which the mold cavity is spherical.

16. (currently amended) A method of producing a golf ball having a golf ball cover layer including a polyurethane, said method comprising:

providing a first reactant which is an isocyanate;

providing a second reactant selected from the

group consisting of a polyol, a polyamine, and combinations thereof;

heating said first reactant to a temperature of from about 80° to about 130° F.;

heating said second reactant to a temperature of from about 80° to about 150° F.;

mixing said first reactant and said second reactant together to form a thermoset reaction mixture;

providing a molding assembly defining a molded cavity and having a golf ball component positioned within said molding cavity;

closing the molding assembly around the golf ball component;

introducing said [first reactant and said second reactant] thermoset reaction mixture into said molding cavity; and

molding a golf ball cover layer about said golf ball component from said [first reactant and said second reactant] thermoset reaction mixture, thereby producing said golf ball.

17. (previously presented) The method of claim 16 wherein said second reactant is a polyol.

18. (previously presented) The method of claim 16 further comprising:

heating said molding assembly to a temperature of about 140° to 170° F.

19. (previously presented) The method of claim 16 further comprising:

adding a density-increasing filler to at least one of said first reactant and said second reactant.

20. (cancelled)

21. (new) The method of claim 1 in which said injecting step is performed by reaction injection molding.

22. (new) The method of claim 16 in which said introducing step is performed by reaction injection molding.